REMARKS

Claims 10 and 11 have been cancelled without prejudice. New claims 12-15 have been added. Thus, Claims 1-9, and 12-15 are pending in the present application.

Drawings

The Examiner objected to the drawings for failing to comply with 37 CFR 1.84(p)(4) because reference numerals "91" and "96" designate both a switch box in figure 4. Applicant respectfully disagrees. Figure 4 is in compliance with 37 CFR 1.84(p)(4). Only a single numeral, namely numeral "96" designate the switch box. Numeral "91" designates a control signal and not the switch box. Applicant hereby submits a set of formal drawings according to 37 CFR 1.84.

Specification

The Examiner objected to page 4 of the specification because of wrong numerals indicating digital signal processor 72. Applicant submits a replacement page 4 showing the correct numerals according to 37 C.F.R. 1.121(b)(1)(ii). For the convenience of the Examiner a mark up version of page 4 is also submitted showing all changes made according to 37 C.F.R. 1.121(b)(1)(iii).

Claim rejection under 35 USC §112:

Claim 6 has been amended to overcome the 35 USC §112 objection. The claim now includes proper antecedent basis for all signals. Claim 10 has been cancelled.

Claim rejection under 35 USC §102:

Claims 1-7, and 9 have been rejected under 35 U.S.C. 102(b), as being anticipated by Sharma et al.(US Patent No. 5,471,470.)

Independent claims 1 and 6 have been amended to more clearly define the present invention. The present invention is related to computer systems having a stereo audio system. Such a stereo audio system is usually provided on the

motherboard of a personal computer or can be added to modular systems by means of a sound card which can be plugged into one of the extension slots of a modular system. These stereo sound systems receive usually a digital data stream from a program application to output a stereo signal. Usually, such a system uses a pair of loudspeakers coupled with the stereo output of the soundcard. The present invention uses such a stereo output system for a selectable speakerphone headset function in a telephony application. To this end, an audio processing means, for example the main processor or a dedicated digital signal processor, processes telephony audio data to be output through the already existing stereo output system of the computer system. Instead of a usual stereo output, the system according to the present invention uses one of the stereo channels for output through a loudspeaker and the other channel for output through a headset. The selection between the loudspeaker and headset is done by processing a digital stereo signal fed to the stereo output system. For example, if the right channel is coupled with the headset and the left channel is coupled with the loudspeaker, this digital stereo signal only comprises a right channel when the headset is selected and only comprises a left channel when the loudspeaker is selected. Such a system does often not require additional hardware because a stereo sound system is already present in most personal computers.

The independent claims 1 and 6 now include limitations reflecting the above explanation. The amended limitations of these claims have been disclosed throughout the original submitted specification. No new matter has been added. Sharma discloses a different approach. The Sharma system does not generate a stereo signal but rather a single mono audio signal provided to a dedicated special digital telephone CODEC 305. The digital telephone CODEC then can be controlled to output this signal to a variety of output devices. This system needs a plurality of special dedicated hardware as shown in figure 3 of Sharma. The system does not include a stereo output system such as a soundcard or a similar arrangement on a motherboard of a computer system which is already present. On the contrary, the Sharma system requires additional complex hardware to provide the functionality of the present invention.

Claims 10 and 11 have been rejected under 35 U.S.C. 102(e), as being anticipated by Brown et al.(US Patent No. 5,822,406.) These claims have been cancelled without prejudice. There, the objections with regard to these claims are considered moot.

Claim rejection under 35 USC §103:

Claim 8 have been rejected under 35 U.S.C. 102(e), as being unpatentable over Sharma in view of Wilson (US Patent No. 6,169,734). Claim 8 is dependent on claim 6 and, thus, includes all the limitations of claim 6. As explained above, Sharma does not disclose to generate a stereo signal which is output through a stereo sound system. The Wilson system does not add anything with respect to this limitation. Wilson also describes a dedicated hardware to directly couple a computer system with a telephone network. No internal stereo sound system is provided or used. Therefore, no stereo signal is generated as claimed in independent claim 6.

Claims 2-5, and 7-9 are dependent claims which include all limitations of at least the respective independent claims 1 and 6 they refer to. Therefor, these claims are allowable at least to the extent of their respective independent claims 1 and 6.

New claim 12 further includes the limitation of generating a ringing signal through the stereo audio sound system of a computer system. Claims 13-15 are dependent on claim 12 and provide further useful limitations. The limitations of these claims have been disclosed throughout the original submitted specification. No new matter has been added. Furthermore, these limitations are not disclosed in any of the prior art cited by the Examiner.

CONCLUSION

As hereby amended, claims 1-9, and new claims 12-15 are pending in the application. The application as defined in the pending claims is patentable under 35 U.S.C. 102 in view of Sharma et al. and under 35 U.S.C. 103 in view of Sharma and

Wilson et al. Therefore, applicants respectfully request withdrawal of the rejection and allowance of all pending claims.

Respectfully requested,

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Claim Amendment Version With Markings to Show Changes Made to the Prior Pending Claims:

WHAT IS CLAIMED IS:

1. (AMENDED) A **computer [Data processing]** system comprising:
- an audio processing means receiving data within said **computer[data processing]** system for **processing digital audio signals [converting said data]** into **[an analog]a digital audio stereo** signal with a **[first and a second analog] left and right** channel;
- **a sound system for[**an audio output means receiving said analog signal and] providing **stereo sound with a left and a right stereo output signal within said computer system [a first and second output signal] receiving said digital audio signals** wherein **[said first]one of said stereo** output signal**s** is provided for a loudspeaker and **[said]the other of said stereo** output **[second]** signal**s** is provided for a headset;
- said audio processing means upon a control signal either provide an audio signal on said **[first]left** or on said **[second]right** channel.

2. (AMENDED) A **computer [Data processing]** system according to claim 1, wherein said **[data processing]computer** system is coupled with a data network and said receiving data are packetized audio data.

3. (AMENDED) A **computer [Data processing]** system according to claim 1, wherein said **[data processing]computer** system is coupled with a telephony network and said receiving data are telephony [(analog or digital)] audio data.

4. (AMENDED) A **computer [Data processing]** system according to claim 1, wherein

said system is a telephony over network system.

5. (AMENDED) A **computer** **[Data processing]** system according to claim 1, wherein said control signal is generated by a manual input device coupled with said data processing system.

6. (AMENDED)Method for providing audio signals within a data processing system comprising the steps of:

- receiving a digital signal representing an audio signal;
- receiving a control signal;
- processing said digital signal to generate a **[two channel]**stereo signal **having a left and right stereo audio channel** and upon said control signal providing said **audio** signal for either a **[first or a second]** **left or right stereo** audio channel, wherein **[said first]one of said stereo channels [signal]** is provided for a loudspeaker and **the other one of said stereo channels [said second signal]** is provided for a headset;
- converting said **[first and second signals]stereo signal** into analog signals.

7. Method according to claim 6, wherein said digital signal is provided by a telephony over network system and said control signal is received after a ringing signal is detected.

8. Method according to claim 7, wherein the ringing signal is output on both audio channels.

9. Method according to claim 7, wherein the ringing signal is output on one audio channel.

10. (CANCELLED) Data processing system comprising:

- an audio processing means receiving data within said data processing system for converting said data into an analog signal;
- a switching means receiving said analog signal and having a first and second output wherein said first output is provided for a loudspeaker and said second output is provided for a headset;
- said switching means upon a control signal either couple said audio signal with said first or second output.

11. (CANCELLED) Data processing system according to claim 10, further comprising means for receiving a manual input of a user and for generating said control signal after an incoming call is detected.

Please add the following claims:

12. (NEW) Method for providing audio signals within a data processing system having a stereo audio output system with a left and a right channel, wherein one channel is coupled with a loudspeaker and the other channel is coupled with a headset, the method comprising the steps of:
 - receiving a digital signal representing an audio signal provided by a telephony over network system;
 - receiving a ringing signal;
 - generating a ringing sound on at least one of said channels of the stereo output system, wherein said one channel is the channel coupled with the loudspeaker;
 - receiving a control signal after said ringing signal is detected;
 - processing said digital signal to generate a stereo signal and upon said control signal providing said audio signal for either a left or right stereo audio channel;
 - converting said stereo signal into analog signals;

- providing said stereo signal to said stereo audio output system.

13. (NEW) Method according to claim 12, wherein said ringing sound is generated with a pre-defined volume.

14. (NEW) Method according to claim 12, wherein said ringing sound is generated for both channels of said stereo output system, wherein each channel comprises a pre-defined volume.

15. (NEW) Method according to claim 12, generating said ringing sound on at least one of said channels of the stereo output system independent from the selected audio channel.

Fig. 2 shows details of the audio system within a multi-media workstation 7 according to Fig. 1. Workstation 7 comprises an input interface 71 which couples workstation 7 with network 1. Input interface 71 is coupled with a digital signal processor **(DSP)** 72 which processes the packetized incoming data stream into a stereo audio signal and processes any audio signal from microphone 13 received through an A/D converter in audio card 73 into a packetized data stream which can be transferred over network 1. A program control unit 74, such as the central processing unit, receives data from a keyboard or mouse or any other input device and feeds a respective control signal to DSP 72. DSP 72 generates a left and a right audio signal which is fed to an audio card 73. Audio card 73 comprises D/A and A/D converter and respective amplifier stages to drive loudspeaker 8 and/or headset 10. The audio card may also have additional input/outputs 14, for example, for a second set of loudspeakers and/or additional microphones.

In the embodiment shown in Fig. 2, DSP 72 manages incoming and outgoing data streams under the control of program control unit 74. In this embodiment only one speaker 8 is used which is coupled to either the right or left output of audio card 73. The other output of audio card 73 is connected to headset 10. In case of an incoming call DSP 72 generates a ringing signal which is fed to the audio channel coupled with loudspeaker 8. In another embodiment the ringing signal can be applied to both loudspeaker 8 and headset 10 with appropriate volume settings for each of the outputs. On the screen of workstation 7 an Alert-Box will be generated as for example shown in Fig. 5. Such an Alert-Box indicates in addition to the ringing signal that an incoming call is waiting to be picked up. The user can, for example in a window-based graphical user interface, move an arrow 104 to select one of three choices. The selection is done by clicking on a respective button or icon 101, 102, or 103. Clicking on button 101 selects a speaker phone function. In this mode all incoming audio data are processed by DSP 72 into a single digital audio signal which will be converted into an analog audio signal by means of audio card 73. This single analog signal is then fed to speaker 8. Clicking on button 102 selects the headset mode. In this mode DSP 72